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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/067,505

02/07/2002

Ikuo Kawamoto

020532

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02/23/2004

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EXAMINER

PRITCHETT, JOSHUA L

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 02/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/067,505

Applicant(s)

KAWAMOTO ET AL.

Examiner

Joshua L Pritchett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 June 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

This action is in response to Amendment filed November 24, 2003. Claims 1-3 have been amended as requested by the applicant.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weber in view of Kameyama (US 6,342,934).

Regarding claim 1, Weber discloses a polarizing member comprising a sheet-like member (110) formed so that linearly polarized light can be obtained as transmitted light through the sheet-like member (col. 26 lines 29-30), wherein the sheet-like member exhibits a transmittance difference of not larger than 6% between transmitted light components within a 20 nm-wide wavelength region in a transmission spectrum of light in a wavelength range of from 520 to 640 nm (Fig. 32 lines a and b) when the natural light is incident on the sheet-like member at any angle ranging from an angle viewing from a line normal to a surface of the sheet-like

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member to an election angle of 80 degrees with respect to the line normal to the surface of the sheet-like member (col. 26 lines 31-32). Weber states that the polarizer shown in Fig. 10 is an illustrative example of a polarizer (col. 2 lines 30-31) and Fig. 32 is a graph showing the performance of the polarizer created as taught in Example 7 (col. 26 line 28). Weber states that light polarized in the non-stretch direction is transmitted (col. 26 lines 29-30), thus the light transmitted has a linear polarization. Weber lacks reference to the use of a laminated absorptive polarizer. Kameyama teaches a laminated absorptive type polarizer (3; col. 11 lines 49-50), a circularly polarized light separating sheet (1) comprising cholesteric liquid-crystal layers in close and integral contact with one another (col. 3 lines 33-35; Fig. 8) and a quarter wave plate (21). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the polarizer of Weber be a laminated absorptive polarizer and to include the circularly polarized light separating sheet and quarter wave plate for the purpose of having the polarizer have a strong bond to the liquid crystal display apparatus and to emit linearly polarized light.

Regarding claim 2, Weber teaches the invention as claimed but lacks reference to cholesteric liquid crystals. Kameyama teaches wherein the layers of mixtures of cholesteric liquid-crystal polymers are formed on interfaces of cholesteric liquid-crystal layers (col. 3 lines 33-35). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the Weber invention include the circularly polarized light separating sheet as taught by Kameyama including the structure of the layer for the purpose of having precise control over the linearly polarized light emitted by the polarizing member.

Regarding claim 3, Weber teaches the invention as claimed but lacks reference to the use of cholesteric liquid crystal polymers. Kameyama teaches wherein the circularly polarized light separating sheet is obtained by applying solutions of cholesteric liquid crystal polymers (col. 3 lines 33-35). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the Weber invention include the circularly polarized light separating sheet as taught by Kameyama including the structure of the layer for the purpose of having precise control over the linearly polarized light emitted by the polarizing member.

Regarding claim 4, Weber discloses an illuminator (172) comprising a planar light source (140) including a reflection layer (176) on a rear surface of the planar light source (Fig. 10), and a polarizing member (150) disposed on a front surface of the planar light source (Fig. 10).

Regarding claim 5, Weber teaches a planar light source (140), but lacks reference to an emission-line peak. It is commonly known in the art to have a light source that emits an emission light peak. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the Weber light source emit an emission-line peak for the purpose of accentuating a desired color in the display.

Regarding claim 6, Weber teaches the at least one prism array layer (113) disposed between the planar light source (140) and the polarizing member (Fig. 11). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaches of Figs. 10 and 11 of Weber and place the prism array layer between the light source and the polarizing member for the purpose of limiting the amount of light incident the polarizer to prevent premature degradation of the polarizing member.

Regarding claim 7, Weber teaches wherein the at least one prism layer is formed by at least two prism array layers in upper (112) and lower layers (113), direction of arrangement of prism arrays of the at least two prism array layers cross each other (Fig. 14).

Regarding claim 8, Weber discloses a liquid-crystal display device (170) comprising an illuminator (172) and a liquid crystal cell (147) disposed on a light exit side of the illuminator (Fig. 10) through a polarizing member (150).

Regarding claim 9, Weber teaches the polarizing member (150) and the liquid crystal cell (147) are bonded closely to each other through an adhesive so as to be integrated with each other (Fig. 10). It is well known in the art to use adhesive layer to attach two optical members together. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use an adhesive to attach the polarizing member to the liquid crystal cell of Weber for the purpose of permanently attaching the two elements together to prevent any change in the incident angles of the incoming light over time.

Regarding claims 10 and 11, Weber in combination with Kameyama teaches the structural elements of claims 10 and 11 and therefore should be able to be modified by one of ordinary skill in the art in any manner necessary to create the claimed performance. It would have been obvious to one of ordinary skill in the art to have a very low transmission difference for the purpose of uniform and predictable transmission of light through the polarizing member.

Response to Arguments

Applicant's arguments, see Amendment, filed November 24, 2003, with respect to the rejection(s) of claim(s) 1-3 under 35 U.S.C. 102 (e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Weber in view of Kameyama.

Applicant's arguments, see Amendment, filed November 24, 2003, with respect to 35 U.S.C. 112 first paragraph of claims 1, 10 and 11 have been fully considered and are persuasive. The 35 U.S.C. 112 first paragraph of claims 1, 10 and 11 has been withdrawn.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua L Pritchett whose telephone number is 571-272-2318. The examiner can normally be reached on Monday - Friday 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JLP



DREW A. DUNN
SUPERVISORY PATENT EXAMINER